

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A field-effect transistor comprising:  
a gate electrode formed at one side of a base substrate;  
a source electrode formed at the one side of the base substrate;  
a drain electrode formed at the one side of the base substrate;  
an insulation layer formed between the gate electrode and the source electrode  
and between the gate electrode and the drain electrode;  
a semiconductor layer formed around the source electrode and the drain  
electrode; and  
a functional layer provided so as to come into contact with the semiconductor  
layer and containing electron acceptors, said functional layer being arranged between said  
semiconductor layer and said insulating layer,  
wherein the electron acceptor is a  $\pi$ -conjugate molecule composed of an  
ethylene molecule or a  $\pi$ -conjugate structure whose carbon number is 3 to 15 to which at least  
one group of -CN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, and =O is linked.
2. (Original) The field-effect transistor according to claim 1, wherein the  
electron acceptor has a half-wave reduction potential of -0.46 V or higher.
3. (Canceled)
4. (Previously Presented) The field-effect transistor according to claim 1,  
wherein the  $\pi$ -conjugate structure has a carbon number of 3 to 15 and in which a heterocycle  
including an S atom as a heteroatom is formed.
5. (Original) The field-effect transistor according to claim 1, wherein the  
thickness of the functional layer is 0.5 to 500 nm.

6. (Original) The field-effect transistor according to claim 1, wherein the functional layer satisfies the following expression (1);

$$d_2 \times 0.001 \leq d_1 \leq d_2 \times 1 \cdots (1)$$

where  $d_1$  denotes the thickness of the functional layer and  $d_2$  denotes the thickness of the insulation layer.

7. (Currently Amended) A field-effect transistor comprising:

- a gate electrode formed at one side of a base substrate;
- a source electrode formed at the one side of the base substrate;
- a drain electrode formed at the one side of the base substrate;
- an insulation layer formed between the gate electrode and the source electrode and between the gate electrode and the drain electrode;
- a semiconductor layer formed around the source electrode and the drain electrode; and
- a functional layer provided so as to come into contact with the semiconductor layer and containing electron acceptors, wherein the concentration of the electron acceptors contained in the functional layer is 0.01 to 10 mass%, and the electron acceptors are  $\pi$ -conjugate molecules, wherein each  $\pi$ -conjugate molecule is composed of an ethylene molecule or a  $\pi$ -conjugate structure whose carbon number is 3 to 15.